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CLASS DIFFERENCES IN ESTABLISHMENT PATHWAYS TO FATHERHOOD WAGE PREMIUMS

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CLASS DIFFERENCES IN ESTABLISHMENT PATHWAYS TO FATHERHOOD WAGE PREMIUMS

ABSTRACT

Organizations have been argued to favor fathers over childless men and skilled fathers over less-skilled ones, but group wage inequalities vary across as well as within establishments. This paper theorizes class differences in the contribution of being employed in a high-wage firm to the fatherhood wage premium. Analyses of linked employer-employee data from the Canadian Workplace and Employee Survey reveal that sorting into high-wage establishments accounts for 60% of the economy-wide premium for less-educated and non-professional fathers, whereas high-skilled fathers tend to work in lower-wage establishments but receive the largest net fatherhood premium within firms. Among the subsample of fathers who changed employers in the past five years, less-skilled fathers fared worse whereas high-skilled fathers sorted into high-wage firms. Results thus suggest that employment in a higher wage firm likely enables less-skilled men to transition to fatherhood, whereas high-wage employers may discriminate in favor of only high-skilled fathers in hiring.

Keywords: Canadian families, fatherhood, income or wages, paternal employment

CLASS DIFFERENCES IN ESTABLISHMENT PATHWAYS TO FATHERHOOD WAGE PREMIUMS

Parenthood widens gender economic inequalities, with fatherhood predicting a wage premium that contrasts with the wage penalty for motherhood (Lundberg & Rose, 2000). Not all fathers benefit equally, though, as the magnitude of the North American net fatherhood wage premium can vary across groups (Glauber, 2008; Hodges & Budig, 2010; Killewald, 2013; Waite & Denier, 2015). One structural argument for group differences in the premium is that they legitimate between- and within-gender hierarchies of bureaucratic organizations (Hodges and Budig 2010). But wages vary as much across as within establishments (Groschen, 1991; Lazear & Shaw, 2008). Consequently, how workers sort into low- or high-wage establishments can account for some of the economy-wide group wage inequalities (Fuller, forthcoming; Javdani, 2015; Pendakur & Woodcock, 2010). In this paper we theorize and test educational and occupational differences in the contribution of establishment sorting to fatherhood wage premiums.

Very little is known about the role of establishment sorting and fatherhood wage premiums because of the limited availability of representative matched employee-employer data (Tomaskovic-Devey & Avent-Holt, 2016). Through the 1990s, Europe was ahead of North America in the needed data (Abowd & Kramarz, 1999). Analysis of one such Norwegian administrative data set found that white-collar fathers were actually located in lower-paying establishments than their childless counterparts; it was their over-representation in higher-paying occupations within establishments that accounted for their slight wage premium (Petersen, Penner, & Høgnæs, 2014). Yet group differences in U.S. fatherhood premiums raise the question of whether the sorting processes are the same for all educational or occupational groups.

Furthermore, Norway and the other Nordic countries enjoy extensive centralized wage-setting that reduces aggregate wage inequality (Card, Lemieux, & Riddell, 2003) and wage variation across establishments (Simón, 2010). Nordic social policies also narrow gender employment disparities associated with parenthood (Petersen, et al., 2014). These national policies and institutions likely account for the much smaller net fatherhood premium found for Norwegian (Petersen, et al., 2014) and Swedish (Albrecht, Björklund, & Vroman, 2003) men as compared with the 5% to 9% net premium found for U.S. (Hodges & Budig, 2010; Killewald, 2013; Lundberg & Rose, 2000) and Canadian fathers (Waite & Denier, 2015). In the more unequal North American context, sorting into high-wage workplaces may be an important pathway to a fatherhood wage premium, particularly for less-skilled men with less portable human capital.

We use Statistics Canada's Workplace and Employee Survey (WES) to investigate the role of establishment sorting in configuring fatherhood wage premiums and group differences therein. A notable strength of the WES is that it contains a largely representative sample of employed men. Results are therefore not restricted to a particular organization, industry, or employer size as is often the case in organizational research (Tomaskovic-Devey & Avent-Holt, 2016). The WES allows us to estimate what proportion of the economy-wide fatherhood premium and group differences in it net of men's individual characteristics derives from differential sorting into higher- or lower-wage establishments. Additional analyses assess whether sorting into higher-wage workplaces accounts for even more of the fatherhood premium among the subsample of men who voluntarily changed establishments for "a better job" in the past five years. These analyses provide new insights into class differences in the establishment pathways to the fatherhood wage premium.

EXPLAINING FATHERS' WAGE PREMIUM

One cornerstone of gender economic inequality is the disparate impact parenthood has on women's and men's wages. Some of this reflects gender differences in education and full-time experience (Blau & Kahn, 2016), occupations (Blau & Kahn, 2016), and short- or long-work hours (Weeden, Cha, & Bucca, 2016). But net of these characteristics, Canadian (Zhang, 2009) and U.S. (Budig & England, 2001) mothers incur 4 to 5% penalties for second and higher-order births, whereas fathers receive a net wage premium of similar magnitude for each additional child (Killewald, 2013; Lundberg & Rose, 2002; Waite & Denier, 2015). Although sensitive to modeling decisions, group differences in the net fatherhood premium have also been reported. Highly-educated and professional (Hodges & Budig, 2010), married (Hodges & Budig, 2010; Killewald, 2013), and heterosexual (Waite & Denier, 2015) fathers may garner larger net premiums than their less-advantaged, single or cohabiting, and gay counterparts.

Some of the association between fatherhood and higher gross wages can be accounted for by unobserved heterogeneity as well as individual characteristics. As to unobserved heterogeneity, positive selection might account for the gross premium if the men who become fathers have unmeasured characteristics such as loyalty and commitment valued similarly by employers and potential partners. Positive selection does account for some of the premium in a few European countries, but there is no evidence of any selection in others (Koslowski, 2011). In the United States, ordinary least squares (OLS) estimates of the fatherhood premium are smaller than fixed effects estimates, suggesting U.S. men are negatively selected into fatherhood on stable unmeasured characteristics (Hodges & Budig, 2010; Lundberg & Rose, 2002).

We cannot control for individual fixed effects with the WES data. So depending on whether selection effects among Canadian men are similar to Europe or the United States, our

OLS estimates might under- or over-state the fatherhood wage premium net of stable unobserved characteristics. However, to our knowledge there is no evidence that the direction of selection differs across groups of men within a country. Conclusions of varying group patterns of effects should therefore be robust even if the estimates are downwardly or upwardly biased.

A second explanation for the gross premium is that fatherhood is a transformational experience. Under the male breadwinner norm (Ridgeway & Correll, 2004), becoming a father may motivate men to work longer, harder, or switch occupations or jobs to increase their earnings (Lundberg & Rose, 2000; Percheski & Wildeman, 2008). Wives' responsibility for the bulk of family unpaid work in theory supports this greater effort (Becker, 1981). If so, then these factors should fully account for any gross wage premium associated with fatherhood. But a wage premium persists regardless of whether fathers' paid work hours increase or decrease (Glauber, 2008; Koslowski, 2011; Lundberg & Rose, 2000) and irrespective of their time in unpaid domestic work (Killewald & Garcia-Mangano, 2016; Koslowski, 2011). There is conflicting evidence as to whether wives' employment reduces the premium (Hodges & Budig, 2010; Killewald, 2013; Lundberg & Rose, 2000), but relative household specialization does not account for group differences in it (Glauber, 2008; Hodges & Budig, 2010).

Killewald (2013) contends those fathers most committed to the breadwinner role exert the greatest effort, and are therefore the only ones to earn a significant premium net of individual characteristics. Killewald (2013) had no measures of commitment or effort per se, but she argued it was strongest when men were married and co-residing with their biological children. In this family form, Killewald (2013) found no educational or racial-ethnic differences in the net premium. Her conclusions regarding group differences should be viewed with caution, however. The well-documented educational and racial gradients in marriage and divorce (Smock &

Greenland, 2010) suggest effects associated with marriage and co-residing with biological children mask education and racial-ethnic differences in the likelihood of being in this group, a possibility Killewald (2013, 109) acknowledges.

Structural Explanations

Any fatherhood wage premium that remains after accounting for individual and household factors is often attributed to employer discrimination. Widespread cultural beliefs of fathers as family breadwinners may color employer perceptions of their productivity and commitment (Ridgeway & Correll, 2004; Killewald, 2013). Hodges and Budig (2010) argued that inequalities become entrenched when stereotypes about the productivity of different groups are linked with organizational distinctions (see also Ridgeway, 2011; Tilly, 1998). From this Hodges and Budig hypothesized that the net wage privilege of fatherhood would be greatest for men displaying hegemonic masculinities prized within bureaucratic organizations, such as rational authoritative leadership and technical competence (Acker, 1990; Connell & Messerschmidt, 2005). In support of this, Hodges and Budig (2010) found that a university degree and being in a professional occupation predicted significantly larger net premiums for white married U.S. fathers.

A weakness in Hodges and Budig's (2010) conceptualization is that they ignored that wages vary as much across organizations as within them (Britton, 2000; Groshen, 1991; Lazear & Shaw, 2008). Employer discrimination coupled with bureaucratic logics may indeed favor fathers within a given workplace, but both the premium and group differences in it potentially derive from how groups of fathers are distributed across establishments as well. The contribution of establishment sorting to the economy-wide fatherhood premium cannot be tested with the individual-level data used in North American studies to date.

ESTABLISHMENT SORTING AND THE FATHERHOOD WAGE PREMIUM

Establishments account for as much if not more wage variation as occupations (Groshen, 1991; Lazear & Shaw, 2008), but their contribution to family wage inequalities is a relatively new area of study. Establishments vary in their average wages, with some employers paying higher average wages to encourage greater productivity, accumulation of firm-specific skills, and reduce employee turnover (Shapiro & Stiglitz, 1984; Weiss, 1990). The differential sorting of groups into high-wage establishments contributes to economy-wide group wage inequalities. For example, differential access to higher-paying establishments account for a large part of the glass ceilings faced by equally-qualified Canadian women (Javdani, 2015) and immigrants (Pendakur & Woodcock, 2010), and Fuller (forthcoming) finds that sorting into lower-wage establishments accounts for the bulk of Canadian women's motherhood wage penalty.

Over-representation in high-wage firms—positive sorting—could contribute to fathers' wage premium. Petersen and his colleagues (2014) did not find this to be the case among white-collar Norwegian fathers, but the restricted occupational focus of that study precludes generalizing to all workers. The possible reasons for fathers' over-representation in high-wage firms span selection, motivation, and employer discrimination in conjunction with two general worker strategies for enhancing wages.

The first worker strategy is to stay with a firm and ascend the career ladder, accruing any wage benefits of tenure and firm-specific skills. On average the annual wage returns to tenure are quite small, between 1 and 3% (Altonji & Williams, 2005; Farber, 1999). Tenure returns are greater, however, in the high-wage firms paying a premium to retain workers (Farber, 1999). In turn, fathers might be prevalent in high-wage establishments because of selection. Men employed in high-wage establishments may be more likely to transition to fatherhood insofar as

higher wages and the prospect of greater wage growth make it easier to meet the extra expenses of children. A related possibility is that theories of the causal relationship between fatherhood and productivity may have the order wrong. Rather than fatherhood making men more productive, more productive men may be more likely to become fathers. As high-wage firms seek and reward more productive workers, fathers (if truly productive) would be more likely to be among their workforces.

H1: Our first hypothesis is therefore that sorting into high-wage firms accounts for a significant proportion of the fatherhood wage premium among white Canadian men. We do not have the individual-level panel data to assess men's selection directly, but if being in high-wage establishments accounts for the fatherhood premium, controlling for sorting should reduce or even eliminate the economy-wide wage premium net of fathers' individual characteristics.

We further anticipate class differences in the contribution of establishment sorting to the fatherhood wage premium. Less-skilled workers have fewer within-firm pathways to higher wages than high-skilled workers. Their job ladders rarely extend high in the organizational ranks and their lower skills reduce the likelihood of changing positions within the firm to access higher-reaching ladders (Rosenfeld, 1992). Less-skilled workers also have less access to performance-related bonuses. Lemieux and his colleagues (2009) found that twice as many U.S. men in professional and managerial occupations received performance-based incentive pay—and its associated wage bonus—as compared with men in craft occupations. Consequently, average returns to tenure are flatter for less-skilled men (Gottshalk, 2001).

These class differences in within-firm opportunity structures mean less-skilled fathers have fewer possibilities for increasing their wages vis-à-vis childless men within a given

establishment, which increases the desirability of being in a high-wage firm. We therefore hypothesize that:

H2: Sorting into high-wage establishments accounts for more of the economy-wide fatherhood wage premium for less-educated fathers and those in non-professional occupations than for their high-skilled counterparts.

In contrast, the superior within-firm opportunity structures for university-educated fathers and those in professional or managerial occupations leave greater room for inequalities to emerge between fathers' and childless men's wages. Hence:

H3: Net of establishment sorting, high-skilled fathers will have larger fatherhood wage premiums than lesser-skilled fathers.

Changing Establishments

Some indication of individual motivation and/or employer discrimination behind sorting into high-wage establishments may be ascertained among fathers undertaking the second strategy for enhancing wages: voluntarily changing establishments in pursuit of a better job (Burdett, 1978; Farber, 1999). There are other reasons workers change jobs, including being fired, laid off, or having a business close. These are forced job changes, however, and in the United States are on average associated with wage penalties (Fuller, 2008). We limit theorization and analysis to voluntary changes to focus on those indicating fathers' greater agency and freedom to be more selective in order to enhance wages.

For all workers, the returns to a voluntary move should exceed any costs, including the time to find job vacancies, write letters of application, attend interviews, as well as lost tenure premiums with the current firm (Burdett, 1978; Devine & Kiefer, 1991). In general, however, we believe fathers will be less likely than childless men to voluntarily change employers for three

reasons. First, searching for a new job takes time and effort, and fathers may find their ability to do so constrained by family time obligations. Second, fathers are also likely to be more geographically limited given the need to consider disruption to children's lives when an employer change necessitates a residential move. Third, fathers may be more risk-averse. New jobs do not always work out and given family financial obligations, fathers may be less willing to take this risk even if offered favorable initial wages. These constraints raise fathers' reservation wage, which predicts lower voluntary mobility. Consequently:

H4: Fathers will be less likely to voluntarily change employers than childless men.

Although fathers will be less likely to change firms, fatherhood may motivate those that do to take on the additional search costs of finding positions in high-wage establishments to ensure greater returns over time. High-wage employer discrimination could favor fathers over childless men during the hiring process as well. At the hiring stage, employers have less information about an applicant's productivity and may draw on perceptions of a group's productivity when deciding whom to hire (Altonji & Blank, 1999). The cultural stereotype of fathers as motivated family breadwinners promotes this perception (Killewald, 2013; Ridgeway & Correll, 2004). To date, correspondence studies of employer hiring have found no statistically significant bias favoring fathers over childless men with identical résumés (Bygren, Erlandsson, & Gähler, 2017; Correll, Benard, & Paik, 2008). Yet no correspondence study has distinguished employers' average wage levels. High-wage employers could be more inclined to view fatherhood as a salient indicator of the productive and loyal workers they seek. Therefore, the possibility that high-wage employers discriminate in favor of fathers in hiring cannot be ruled out.

Possible mover-father motivation and/or high-wage employer hiring prejudices lead to the final set of hypotheses.

H5: If fathers are motivated to find a new high-wage employer or if such employers are more likely to hire fathers than childless men, sorting into high-wage establishments should account for a significant portion of the fatherhood wage premium among voluntary mover fathers.

Whether or not there are class differences in these sorting effects is more ambiguous. On the one hand, Killewald (2013) did not find any educational differences in wage premiums once limiting the group to the married fathers co-residing with biological children that she considered highly-committed. All fathers that voluntarily change jobs for better wages could similarly be considered highly committed to their breadwinning role. In addition, if higher-wage employers unilaterally favor the real or perceived productivity of fathers over childless men, there should be no class differences in premiums. One possibility is therefore:

H6a: If there are no class differences in mover fathers' motivation and/or higher-wage employers similarly value the perceived or real productivity of fathers, there should be no educational or occupational differences in positive sorting among mover fathers.

On the other hand, high-skilled fathers may be more motivated or more savvy about ascertaining the average wage structure of employers and future career prospects than less-skilled fathers. There also remains the possibility that high-wage bureaucratic organizations indeed favor fathers along class lines as argued by Hodges and Budig (2010). The competing possibility is consequently:

H6b: If high-skilled mover fathers are more motivated, and/or better ascertain and take new positions in high-wage establishments, and/or if such establishments favor high-skilled fathers in hiring, sorting into high-wage firms would account for more of the wage premium among higher-skilled than lesser-skilled mover fathers.

METHOD

Data and Sample

Canada's Workplace and Employee Survey (WES) is a mandatory survey fielded from 1999 to 2005, with response rates in excess of 80% for both establishments and employees. The WES employer sample is drawn from the Business Register and consists of all establishments in Canadian provinces with paid employees, with a small number of exceptions, primarily government administration (5.3% of Canadian employment), private households, and religious organizations. The survey unit is the workplace/establishment, so multi-site employers could have multiple entries in the WES. The establishment sample is longitudinal and refreshed every second year to maintain representativeness.

In each odd year (1999, 2001, 2003, and 2005), a new random sample of up to 24 employees was drawn from each establishment proportional to its total size, and then followed the next year regardless of whether the employee continued working for the same establishment. We restrict analyses to the odd-numbered years to ensure employee outcomes are tied to the same establishment, pooling data waves to maximize sample size.

From the pooled data we select white Canadian male workers between the ages of 24 and 44. We limit the sample to white men because the complexity of Canada's minority immigrant population warrants a separate analysis (see Pendakur & Woodcock, 2010). The lower age is set to 24 because the WES does not reveal whether individuals are currently enrolled in school. Men older than 44 are excluded because the WES indicates only if fathers are currently living with children, not whether they have ever had children. At older ages, the group without resident children is more likely to include more men whose children have all grown and left home. These restrictions yield an analytical sample of 21,225 men embedded in 5,713 establishment-years, and 5,020 unique establishments.

To identify a subsample of mover fathers, the WES contains information on whether fathers changed jobs the year prior to or any year subsequent to the birth of their first child. The referent when estimating fatherhood wage premiums using this variable would be all childless men. Yet childless men also change jobs to enhance their wages, so a referent including childless men who stayed as well as moved might inflate mover-fathers' wage premium. Unfortunately, there is no commensurate time point to a birth by which to select a group of childless movers.

Instead, there is also a question in the WES asking whether a worker voluntarily changed employers in the past five years for "a better job." We select a subsample of such voluntary movers. To test fathers' relative voluntary mobility (Hypothesis 4), we include all fathers who moved in the past five years to ensure we do not underestimate fathers' likelihood of changing jobs as compared with the full sample. To estimate mover-father sorting and wages (Hypotheses 5 and 6) from the mover-only sample we subtract the small percentage of mover fathers who are still with their pre-birth employer (i.e., they moved in the past five years but before the birth of their first child). This mover subsample ($n=3,165$) allows us to assess establishment sorting removing any pre-birth selection into high-wage firms, providing insight into effects of father motivation or employer discrimination in positive sorting.

Variables

The dependent variable is men's hourly wages, which include base earnings as well as bonuses, profit sharing, tips, etc. WES respondents were allowed to report different bases of pay; weekly or yearly reports are converted to an hourly wage rate by Statistics Canada based on reported hours and weeks worked. We take the natural log of hourly wages to normalize the wage distribution and minimize the impact of outliers.

The key independent variable is whether a man is a father, measured with a binary variable coded one when a man lives with at least one child under the age of 19. The data do not indicate whether co-residential children are biologically related to the father. Neither is there information on non-residential children. Killewald (2013) found that non-residential children had no impact on U.S. fathers' wages, whereas stepchildren predicted significant wage penalties. If the biological relationship matters in Canada, fatherhood wage estimates may be conservative as they include stepchildren.

Class is measured with education and occupation. This includes four education indicator variables (less than high school, high school degree (referent), non-university postsecondary certificate, and university degree or higher). Another indicator is for men who work in professional or managerial occupations, against the referent of all other occupations. We do not display the model estimates, but instead use the model estimates to calculate the predicted fatherhood wage premium for each group, including the referents, to facilitate comparison of effects across groups. The predicted estimate takes into account the interaction as well as main effects of the variables, with the appropriate standard errors.

Also included in the models are partnership status indicators, one for cohabiting men and a second for single men, against a referent of married men. Some studies have attempted to assess the impact of partnered men's breadwinning status on their premium (Hodges & Budig, 2010; Killewald, 2013). A problem with the breadwinner hypothesis is that fathers' higher wages may encourage mothers to leave the labor force or reduce work hours, not vice versa. For example, Shafer (2011) found that husbands' absolute wages were a stronger predictor of wives' labor force exit than her relative wages. The WES contains no instrumental variables for dealing with this endogeneity. Additional models reveal that breadwinning partnered fathers earn significantly

larger net wage premiums than dual-earning fathers, but sorting into high-wage firms does not account for much of this (results available from the authors).

Included in all models are actual years of full-time experience, along with its square. To capture that returns to experience vary by education, we add further interactions between the experience and education variables (Heckman, Lochner, & Todd, 2006). Indicator variables denote men who work part-time (less than 35 hours per week), and men who work long weekly hours (more than 49). Dummies for survey year control for business cycle effects. In the full sample wage analysis, tenure with the current employer is included as a continuous measure, along with its square. We include interaction terms between tenure and education to account for potential differences in returns to seniority (Gottshalk, 2001); these were minimal.

Analytical Strategy

Logit regression is used to assess fathers' likelihood of voluntarily changing workplaces, including interaction terms between fatherhood and the education and occupation variables. The logit estimates are used to predict each group's likelihood of voluntarily changing jobs in the past five years. To test hypotheses regarding the role of establishment sorting in configuring group differences in the net fatherhood wage premium, we compare estimates of the economy-wide premium with the within-establishment premium for all fathers as well as for the indicated educational and occupational groups of fathers, and for groups of fathers in the mover subsample. The economy-wide net fatherhood premium is estimated by regressing the log of men's hourly wages on individual-level characteristics:

$$\ln Wage_{ij} = x_{ij}\beta + father_{ij}\delta + \varepsilon_{ij} \quad (1)$$

Where $\ln Wage_{ij}$ is the natural log of hourly wage for individual i in establishment j , $x_{ij}\beta$ is a vector of individual characteristics that affect wages detailed above, $father_{ij}\delta$ is the fatherhood

indicator equal to one for fathers, and ε_{ij} is a stochastic mean-zero error term. We also estimate two-way interaction terms between fatherhood and both education and occupation.

The next step is to estimate the within-establishment fatherhood wage effect. An issue with the proportional random sampling of employees in the WES is that it results in a small average number of male employees per establishment in the designated age range. Canay (2011) developed a two-step fixed effect approach for nested data when facing a similar data structure problem, except in his case the issue was too few time periods in a panel. Canay (2011) showed that as long as fixed effects are the same across quantiles given the worker characteristics, the two-step approach removes fixed effects and gives consistent estimates of the slope parameters.

Javdani (2015) adapted Canay's approach to address the WES per-establishment sample size, which we follow here. The analogous assumption to Canay's data structure issue is that the establishment wage effect is consistent across workers within a given establishment (and hence across both the full WES sample and our smaller analytical sample). This allows us to use the full WES sample to estimate establishment wage effects. Subsequent analyses confirm a very high correlation between the overall establishment effects and the sample-specific establishment effects (.91), consistent with Canay's stipulation.

The first step is therefore to use the entire WES sample to estimate the establishment effects, regressing log-hourly wages on the individual control variables, adding further controls for gender, race-ethnicity, and each establishment (Javdani, 2015: 534):

$$\ln Wage_{ij} = x_{ij}\beta + male_{ij}\delta^* + f_{ij}\psi + \varepsilon_{ij} \quad (2)$$

Where f_{ij} is a vector of indicators for each establishment and ψ is a vector of establishment effects measuring establishment-specific average wages conditional on worker characteristics.

The establishment effects are saved and then subtracted from each individual's log-hourly wage

to create a new, transformed dependent variable, $FElnWage_{ij}$. $FElnWage_{ij}$ is individual log-hourly wages purged of the impact of establishment-constant characteristics.

The transformed dependent variable for the sample of white Canadian men is then used to estimate the within-establishment net fatherhood wage premium:

$$FElnWage_{ij} = \chi_{ij}\beta + father_{ij}\delta^{**} + \varepsilon_{ij} \quad (3)$$

Group differences in within-establishment net fatherhood premiums are estimated as for the economy-wide differences, with a series of two-way interaction terms between fatherhood and educational and occupational categories. As noted above, we report the predicted fatherhood wage effect for each group to make comparisons more straightforward.

The impact of establishment sorting is ascertained by comparing the economy-wide (OLS) estimate of the net fatherhood premium and group differences from equation (1) with the establishment fixed effect (EFE) estimates from equation (3). EFE estimates that are smaller than the economy-wide estimates indicate that some of the net premium derives from fathers sorting into high-wage establishments. EFE estimates that are larger than OLS estimates indicate sorting into low-wage establishments, as Petersen and his colleagues (2014) found for white-collar Norwegian men. Hausman tests confirm the significance of the establishment sorting effects (Pendakur & Woodcock, 2010).

Employee sample weights are used in all analyses to adjust for the complex multi-stage and multi-level design of the WES when estimating standard errors. For confidentiality reasons, Statistics Canada does not release sampling information, but instead provides 100 sets of replicate weights that are adjusted copies of the sampling weights. We follow Statistics Canada's recommendations and estimate standard errors using these weights.

RESULTS

Weighted descriptive statistics for the independent and control variables are presented in Table 1. Fathers' and childless men's work hours and distribution across firms of varying size were similar. The majority of men worked between 35 and 49 hours per week regardless of parental status, although a slightly larger percentage of childless men worked part-time whereas a slightly larger percentage of fathers worked 50 or more hours per week. About two-thirds of fathers and childless men worked in firms of less than 100 employees. Education and occupation distributions were similar as well. About one-tenth of the sample had less than a high school degree, half possessed a high school degree, and almost 40% had post-secondary education and above. One-third of men were in professional occupations.

[Table 1 about here]

Where men differed by parental status was in average wages, partnership, experience, seniority, and mobility. Fathers earned \$3.93 more per hour than childless men. Ninety percent of fathers had partners (71% married), as compared with 48% of childless men (25% married). Fathers were older than childless men, with about four more years of full-time experience and more than two years greater seniority within their establishments. Fathers' greater seniority was evident as well in the slightly smaller percentage of fathers that voluntarily moved to "a better job" in the past five years as compared with childless men—15% versus 19%.

Group Differences in Economy-Wide Wage Premiums

The first three columns of Table 2 present results for assessing Hypotheses 1, 2, and 3 for the full sample. In the discussion of all premium estimates, the predicted effects displayed in the table are exponentiated to present them as the predicted percentage change in fathers' hourly wages associated with the characteristic (interaction plus main effects).

The first column displays the predicted effect of fatherhood on wages from economy-wide OLS models for the full sample of men. The aggregate economy-wide fatherhood premium net of individual control variables among white Canadian men was 6.2%, $(e^{(0.060)} - 1) \times 100$, identical to Hodges and Budig's (2010, 734) estimated U.S. premium from their fixed effects model with full controls. Educational and occupational differences in the Canadian economy-wide premium, however, diverged from the U.S. findings for white married fathers (Hodges & Budig, 2010, 735). Wage premiums for white Canadian fathers with a post-secondary certificate or a university degree were significantly smaller than average, at 3.9% and 3.6%, respectively. Predicted occupational economy-wide fatherhood wage premiums did not differ significantly from each other or the average. Canadian fathers in professional occupations received an economy-wide wage premium of 5.1%, whereas non-professional fathers received a 6.5% premium. It is the least-educated Canadian fathers who accrued the largest economy-wide wage premiums relative to their childless peers: 7.6% for high school graduates and 7.3% for high school dropouts. In all, OLS estimates for the full sample suggested no economy-wide premium advantage for highly-educated or professional white Canadian fathers.

The second column of Table 2 presents the predicted fatherhood wage premiums net of establishment fixed effects (EFE) for the full sample. For ease of reference, the calculated percentage of the economy-wide premium accounted for by establishment sorting is in the third column. A positive percentage indicates sorting into higher-wage firms; a negative percentage indicates sorting into lower-wage firms. Sorting effects in the full sample were all statistically significant.

The first hypothesis is that sorting into high-wage establishments would account for some of the economy-wide fatherhood wage premium among white Canadian men. The 3.9% EFE

estimated average premium for all fathers in the full sample was substantially smaller than the 6.2% OLS estimate. This means that white Canadian fathers' sorting into high-wage firms accounted for almost 37% of the economy-wide fatherhood hourly wage premium, strongly supporting Hypothesis 1.

Results also supported the anticipated class differences in sorting and within-firm premiums. Sorting into high-wage establishments accounted for 60.2% of the premium for high-school dropouts and 46.6% of the premium for dads with a high school degree. Controlling for establishment sorting therefore significantly reduced but did not eliminate the magnitude of these fathers' premiums, to 2.8% for fathers with less than a high-school degree and 4% for fathers with a high school degree. Sorting into high-wage firms also accounted for about 57% of non-professional fathers' wage premium, reducing their estimated premium from 6.5% in the OLS to 2.7% in the EFE model. These results strongly support the second hypothesis that sorting into high wage establishments would account for more of the economy-wide fatherhood premium for less-skilled men.

In contrast and consistent with Petersen et al. (2014), results for the full sample indicated that the smaller economy-wide premium for professional and highly-educated fathers reflected sorting into lower-wage establishments. Once controlling for establishment sorting, fathers in professional occupations received a 7.0% and university-educated dads received a 5.0% wage premium. These were the largest within-establishment wage premiums among the full sample, confirming the third hypothesis that the most advantaged fathers would garner the largest premiums net of establishment fixed effects.

[Table 2 about here]

Mover Fathers

The predicted effects from the logit regression estimating the likelihood fathers voluntarily change workplaces are in Table 3. As hypothesized (H4), fathers on average were slightly (1.4%) but statistically significantly less likely to voluntarily change employers than childless men. Less-skilled fathers were slightly less likely to change employers than high-skilled fathers. As a whole, however, voluntary mobility is less common for fathers than childless men.

[Table 3 about here]

The third through sixth columns of Table 2 present OLS and EFE predicted wage premiums for fathers who voluntarily changed jobs in the past five years to assess Hypotheses 5, 6a, and 6b. The first thing to note is that on average, mover fathers did worse relative to their childless counterparts as compared with fathers in the full sample. On average mover fathers incurred slight OLS and EFE wage penalties of -0.7 and -0.8%, respectively, although the penalties were not statistically significant. Thus the small percentage of fathers who voluntarily changed jobs in the past five years did not see a wage benefit from this strategy relative to childless men who also changed jobs. In fact, mover fathers with a high school diploma and those in non-professional occupations were predicted to incur significant economy-wide wage penalties of about 3-6% as compared with their childless mover counterparts.

These penalties for less-skilled mover fathers contrast with the 6.3% economy-wide premiums for university-educated mover fathers, which is larger than the OLS estimate for university-educated dads in the full sample. Mover fathers with post-secondary education and those in professional occupations fared about the same as their counterparts in the full sample. The two sets of results for mover fathers indicate both a slight class gradient in the likelihood of voluntarily changing jobs (per Table 3), and larger class differences in the relative returns to the move (per Table 2).

The hypotheses, though, focused on the role of sorting in a mover strategy. We had hypothesized that fathers' greater job search effort and/or high-wage employer discrimination would mean that mover fathers were more likely to sort into higher wage firms than the sample as a whole (H5). A comparison of the fourth (OLS) and fifth (EFE) columns in Table 2 indicates this, on average, was not the case. Among all mover fathers, sorting into high-wage establishments accounted for a statistically insignificant 14.3% of the tiny OLS estimate, far less than the significant 36.6% for the full sample. We therefore reject the fifth hypothesis.

But were there class differences in sorting among mover fathers? The first class difference of note is that group sorting effects among mover fathers differed from those in the full sample. Whereas less-educated and non-professional fathers in the full sample tended to sort into high-wage firms, these groups of mover fathers tended to sort into low-wage firms. Net of sorting, the predicted wage penalties among mover fathers with a high school diploma and in non-professional occupations were somewhat smaller, but still statistically significant. Overall, less-skilled voluntary mover fathers did not end up in higher-wage firms and were relatively worse off as compared with their childless counterparts.

In contrast, whereas high-skilled fathers in the full sample sorted into low-wage firms, high-skilled mover fathers sorted into high-wage firms. More than one-third of the premium for mover fathers with postsecondary credentials and more than 72% of the premium for those with a university degree was accounted for by sorting into high-wage firms. Sorting into high-wage firms also accounted for 6.3% of the premium among mover fathers in professional occupations, a sorting effect that is again opposite of that for professionals in the full sample. After controlling for establishment sorting, however, advantaged mover fathers garnered smaller premiums than

their counterparts in the full sample: 1.7% for university-educated mover fathers and 4.6% for mover fathers in professional occupations.

Consequently, results supported Hypothesis 6b over 6a, in that high-skilled fathers who changed jobs around or after the birth of their first child were more likely to be sorted into higher-paying establishments than less-skilled mover fathers, and indeed as compared with high-skilled fathers in the sample as a whole. Nonetheless, the wage premiums among all groups of fathers who voluntarily changed jobs in the past five years were smaller than for the sample as a whole, with moves in fact predicting significant wage penalties for less-skilled fathers.

DISCUSSION AND CONCLUSIONS

Micro-data used in analyses of North American fatherhood wage effects to date cannot reveal the role of organizations in structuring group differences. We offered a more nuanced class story of fathers' establishment pathways to significant wage premiums. Given less-skilled fathers' limited promotional opportunities within firms, we anticipated that sorting into high-wage firms would account for a larger proportion of their wage premium. In contrast, we anticipated that high-skilled fathers' greater within-firm opportunity structures would lead them to receive the largest premiums net of establishment sorting.

Comparisons of economy-wide estimates with those from models controlling for establishment fixed effects using the Canadian linked employee-employer WES data confirmed class differences in the establishment pathways to a premium. Highly-educated Canadian fathers and those in professional occupations received smaller economy-wide premiums because they tended to sort into lower-wage establishments. Petersen et al. (2014) found a similar sorting pattern for Norwegian white-collar workers. Once controlling for sorting, however, university-educated and professional fathers received the largest within-establishment premiums as

hypothesized. The larger economy-wide fatherhood premium for less-skilled men, conversely, was accounted for by their tendency to sort into higher-wage establishments as also hypothesized. Net of this, they received smaller but still statistically significant wage premiums.

Disentangling the possible contribution of selection, fathers' motivation, or employer discrimination to these class differences in sorting effects is difficult given the cross-sectional nature of the WES data, a limitation of this study. In an attempt to gain some insight into these processes, we compared effects among a subsample of fathers who voluntarily changed workplaces in the past five years seeking better wages. As anticipated, fathers were slightly less likely to risk a job move than childless men. Relatedly, we anticipated the financial responsibilities of fatherhood would motivate those considering a move to seek out high-wage firms, or that high-wage employers might discriminate in favor of fathers at the point of hire. This was not the case. On average, sorting effects among mover fathers were not statistically significant.

At the same time, there were striking class differences not only in sorting effects among mover fathers, but also in predicted wage effects. In contrast to the full sample, less-skilled fathers who changed jobs sorted into lower-wage firms and net of this incurred significant wage penalties rather than premiums. Patterns differed for the high-skilled fathers. Whereas high-skilled fathers in the full sample tended to sort into low-wage firms, those moving employers sorted into high-wage firms. Hence the economy-wide premiums of fathers in professional occupations and with postsecondary education and above were about the same as or larger than in the full sample, but high-skilled movers achieved this by sorting into high-wage firms.

Assuming fathers of all skill levels considering a move are similarly motivated to find high-wage firms, one reason for these class differences could be that high-skilled fathers are

better at identifying high-wage firms. Another possibility is that high-wage employers favor fatherhood as indicative of greater productivity at the point of hire only when coupled with the technical skills and rational authority valued by bureaucratic organizations (Acker, 1990; Hodges & Budig, 2010). Although correspondence studies to date find no statistically significant employer hiring preference for fathers (Bygren et al., 2017; Correll et al., 2007), future field experiments should gather information on establishments' average wage levels to ascertain whether high-wage firms favor fathers and high-skilled fathers in particular during hiring even if average- or low-wage firms do not.

Once accounting for establishment sorting, though, high-skilled mover fathers' premiums relative to childless men were smaller than in the sample as a whole. This could suggest that within higher-wage firms, high-skilled fathers' relative productivity vis-à-vis similar childless men is not as pronounced. At the same time, results for the sample as a whole indicate that fathers accrue their premiums with tenure within a firm. Fathers who moved jobs in the past five years have not yet accumulated as much tenure as the full sample, which could account for lower within-firm premiums among skilled mover-fathers.

In all, results indicated that less-skilled fathers' establishment pathway to a fatherhood wage premium is likely via pre-birth selection into high-wage firms and remaining with such firms to accrue their greater returns to tenure. Future research with suitable matched employee-employer panel data at the individual level will need to confirm this. Such data allow for individual fixed effects models to control for unmeasured heterogeneity among men, as well as between-establishment comparisons of men's average wage growth rates before and after the transition to fatherhood (see Loughran & Zissimopoulos, 2009). Although such data are still somewhat rare, their availability is steadily increasing (Lazear & Shaw, 2008; Tomaskovic-

Devey & Avent-Holt, 2016). We also did not model dynamics associated with non-voluntary mobility, which could contribute to the more positive employer sorting for low-skilled fathers in the full sample. Although Fuller (2008) found that U.S. men experiencing negative moves such as layoffs or termination generally incurred wage penalties, it is possible that employers may be more hesitant to fire or lay off less-skilled fathers. Another possibility is that potential new employers may be more generous in their interpretation of such events for low-skilled, job-seeking fathers. Assessing parental wage effects and sorting around involuntary moves must be left to future research.

High-skilled fathers have two establishment pathways to their wage premium. Although high-skilled fathers in the full sample were sorted into lower-paying establishments, they received the largest wage premiums within establishments. In contrast, high-skilled fathers who moved jobs tended to sort into high-wage firms, but received somewhat smaller within-establishment premiums than the full sample. These smaller premiums could, however, reflect their shorter post-move tenure. In all we interpret results as indicating the larger premiums accruing to high-skilled fathers within firms also accumulate with tenure, but regardless of a firm's average wage levels. Whether their larger within-firm premiums reflect favoritism in bureaucratic organizations as argued by Hodges and Budig (2010) cannot be tested directly with these data.

The class differences in the contribution of establishment sorting to fatherhood wage premiums in the full sample raise a compelling question. Why have the majority of high-skilled Canadian fathers, like their Norwegian counterparts (Petersen, et al., 2014), sorted into low-wage establishments? One possibility is that high-skilled men select lower-wage establishments to find better work-life balance, the compensating differential argued to account for motherhood wage

penalties (Javdani, 2015). We pose this possibility given the evidence that fathers' childcare time increases with greater education (Raley, Bianchi, & Wang, 2012) and higher wages (Cooke & Hook, forthcoming). Yet employer expectations of work devotion from this group of employees create greater potential for conflict between work and family. High-skilled fathers may consequently choose low-wage establishments if such employers accommodate family demands in exchange for lower average wages. This is an intriguing possibility to be explored in future research.

A final thing to note is that the national context matters. Although the Canadian average economy-wide fatherhood premium was similar to that reported for U.S. dads (Hodges & Budig, 2010; Killewald, 2013), privileged Canadian fathers garnered no economy-wide class advantage. Instead, the least-educated Canadian fathers received the largest premium net of their individual characteristics relative to their childless peers. These country differences in group effects support Acker's (2006) observation that organizational equality regimes reflect the broader socio-economic contexts in which they are situated. One way Canada differs from the United States is that twice as many workers are unionized (Card, et al., 2003). Freeman (1980) highlighted that unionization simultaneously raised the wage floor and blunted the returns paid to high-skilled workers. The greater prevalence of collective bargaining agreements in Canada may account for the smaller economy-wide educational and occupational differences in net fatherhood premiums reported here. More research is needed on how establishment-level collective bargaining, along with policies relating to performance reviews, promotions, and compensation packages further shape group differences in parental wage effects.

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Table 1. *Weighted Descriptive Statistics of Independent and Control Variables, White Canadian Men Age 24 to 44*

	Childless men	Fathers
<i>N of men</i>	8,878	12,347
Wages	20.32 (10.88)	24.25 (13.74)
< High school	10 %	12 %
High school	51 %	52 %
Postsecondary	18 %	19 %
University	21 %	17 %
Manager or Professional	31 %	33 %
Other occupation	69 %	67 %
Changed to “a better job” past five years	19 %	15 %
No spouse	52 %	10 %
Married	25 %	71 %
Cohabiting	23 %	19 %
1-19 Employees	30 %	31 %
20-99 Employees	35 %	32 %
100-499 Employees	21 %	22 %
500+ Employees	14 %	15 %
Age	33.3 (5.8)	36.9 (4.9)
Experience (years)	11.8 (6.6)	16.2 (6.1)
Seniority (years)	5.9 (5.6)	8.0 (6.4)
<35 hours week	9 %	3 %
35-49 hours week	77 %	78 %
50+ hours week	14 %	19 %

Notes: Numbers in parentheses are standard deviations of interval measures.

Table 2. *Predicted Net Fatherhood Wage Premiums with Bootstrap Standard Errors, Economy-Wide (OLS) versus Net of Establishment Fixed Effects (EFE), All White Canadian Men age 24 to 44 and Those Who Voluntarily Moved Jobs in the Past Five Years*

	ALL MEN			MEN MOVING JOBS PAST 5 YEARS		
	Economy- Wide (OLS)	EFE	% OLS due to sorting	Economy- Wide (OLS)	EFE	% OLS due to sorting
<i>N of men</i>	21,225	21,225		3,165	3,165	
All fathers	0.060*** (0.002)	0.038*** (0.002)	36.6%	- 0.007 (0.004)	- 0.008 (0.004)	14.3%
Fathers with less than high school	0.070*** (0.005)	0.028*** ^a (0.003)	60.2%	0.022 (0.013)	0.032*** (0.005)	-45.5%
Fathers with a high school diploma	0.073*** ^{a, b} (0.003)	0.039*** (0.002)	47.0%	- 0.060*** ^a (0.008)	- 0.038*** ^a (0.006)	-36.6%
Fathers with post-secondary certificate	0.038*** ^a (0.004)	0.031*** (0.003)	19.2%	0.040*** ^a (0.009)	0.026*** (0.007)	35.0%
Fathers with a university degree	0.035 ^a (0.007)	0.049*** (0.005)	-38.8%	0.061*** ^a (0.009)	0.017*** ^{a, b} (0.006)	72.1%
Fathers in other occupations	0.063*** (0.002)	0.027*** ^{a, b} (0.002)	56.9%	- 0.031*** (0.007)	- 0.030*** ^{a, b} (0.005)	-3.2%
Fathers in professional/ managerial occupations	0.053*** (0.005)	0.063*** ^{a, b} (0.003)	-24.4%	0.048*** ^{a, b} (0.007)	0.045*** ^{a, b} (0.005)	6.3%

* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed tests)

Notes: Controlling for marital status (three categories, married referent), years of full-time experience, years of full-time experience squared, education (four categories, high school degree referent), interactions between the experience and education measures, tenure with employer, tenure squared, interactions between education and tenure, part-time and long work hours, occupation (non-professional occupations referent), and survey year. Superscript (a) indicates the estimate is significantly different from the average premium; superscript (b) indicates the estimate is significantly different from all others within the group. A positive percentage of sorting indicates sorting into higher-wage firms, whereas a negative percentage indicates sorting into lower-wage firms. All sorting effects are statistically significant at $p < .05$ except where the percentage is in italics.

Table 3. *Predicted likelihood of Voluntarily Changing Jobs in the Past Five Years, White Canadian Men age 24 to 44*

	Predicted Premiums
All fathers	- 0.014*** (0.002)
Fathers with less than high school	- 0.029*** (.004)
Fathers with a high school diploma	- 0.020*** (.003)
Fathers with post-secondary certificate	- 0.020*** (.003)
Fathers with a university degree	0.019*** (.005)
Fathers in other occupation	- 0.027*** (.003)
Fathers in professional/ managerial occupation	0.014*** (.003)
<i>N of men</i>	21,225

* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed tests)

Notes: Controlling for survey year, experience, experience squared, education and its interaction with experience and experience squared, short or long work hours, and survey year.